

IN THE CLAIMS

The listing of the claims provided below is intended to replace the originally filed version of the claims. Please amend the claims as follows:

1. (currently amended) A method of transferring blanks, on a packing machine, from a platform (16) supporting a number of blanks (2) divided into stacks (5), to a store (10) where the blanks (2) are packed successively and seamlessly along a first supply path (P1) of a pickup station (S1) of the packing machine; the method comprising the steps of

forming, at a loading station (S3) and by means of at least one gripping device (14, 15), a group (13) of blanks defined by at least two stacks (5) superimposed and aligned in a container (12);
feeding the container (12) along a second path (P2) to an unloading station (S2) at the store (10);

~~and~~ transferring said group (13) of blanks all together from the container (12) to the store (10); and

guiding the travel of said container (12) to alter the orientation of the container (12) and of the group (13) of blanks during transfer along said second path (P2); wherein the blanks (2) in said store (10) and in said container (12) at the unloading station (S2) extend perpendicularly to a first direction (D1), and the blanks (2) on said platform (16) and in said container (12) at the loading station (S3) extend perpendicularly to a second direction (D2) crosswise to the first direction (D1).

2. (cancelled)

3. (currently amended) A method as claimed in Claim 1, wherein the container (12) is fed along said second path (P2) along a first portion parallel to the first direction (D1), and along a second portion parallel to said second direction (D2).

4. (previously presented) A method as claimed in Claim 3, wherein the container (12) is fed from said loading station (S3) located along said second portion, to said unloading station (S2) located along said first portion.

5. (previously presented) A method as claimed in Claim 4, wherein the container (12) is fed along a portion (T) of said second path (P2), which overlaps with said first path (P1) parallel to said first direction (D1); and faces said unloading station (S2).

6. (previously presented) A method as claimed in Claim 1, comprising determining the position of the blanks (2) in each stack (5) with respect to a reference system by a transfer member (68) of the gripping device (15) as said transfer member (68) is transferred from the platform (16) to said loading station (S3).

7. (previously presented) A method as claimed in Claim 6, comprising locating the reference system on said transfer member (68) by walls (71).

8. (currently amended) A method as claimed in Claim 6, comprising aligning any misaligned blank ~~the blanks~~ (2) in said stacks (5) by said transfer member (68).

9. (currently amended) A method as claimed in Claim 6, comprising rejecting blanks (2) not aligned in said stacks (5) by said gripping device (15).

10. (previously presented) A method as claimed in Claim 1, comprising finding the blanks (2) in said store (10) along said first path (P1), and supporting said blanks (2) by a supporting wall (25) parallel to said blanks (2) and movable along the first path (P1).

11. (previously presented) A method as claimed in Claim 10, wherein said blanks (2) are fed by a conveyor (17); said supporting wall (25) being activated by an actuator (24) controlled independently by the conveyor (17).

12. (previously presented) A method as claimed in Claim 10, comprising activating said supporting wall (25) by an actuator (24) as a function of pressure between the supporting wall (25) and the blanks (2) in the store (10).

13. (previously presented) A method as claimed in Claim 1, comprising moving a supporting wall (25) from a work position in which the supporting wall (25) is located along the first path (P1), to a rest position in which said supporting wall (25) is located alongside said first path (P1).

14. (previously presented) A method as claimed in Claim 13, comprising setting said supporting wall (25) to the rest position when said group (13) of blanks is fed into the unloading station (S2) and exerts a given pressure on said supporting wall (25).

15. (previously presented) A method as claimed in Claim 14, comprising moving the supporting wall (25) in the first direction (D1) upstream from the group (13) of blanks, while maintaining said supporting wall (25) in the rest position; the supporting wall (25) being moved into the work position; and the supporting wall is brought into contact with the group (13) of blanks.

16. (previously presented) A method as claimed in Claim 1, comprising transferring each stack (5) from said platform (16) to said container (12) along a plane (PA) and without changing the level of the stack (5).

17. (previously presented) A method as claimed in Claim 16, wherein the stacks (5) on said

platform (16) are arranged side by side to form superimposed layers (6); the method further comprising moving said platform (16) vertically so that, each time, the top layer (6) lies in said plane (PA).

18. (previously presented) A method as claimed in Claim 16, comprising moving said container (12) so that a surface supporting the stacks (5) in said container (12) lies in said plane (PA).

19. (previously presented) A method as claimed in Claim 18, comprising supporting the stacks (5) by a wall (39) of said container (12) or by the top blank (2) in the top stack (5) housed in the container (12).

20. (previously presented) A method as claimed in Claim 16, comprising moving a transfer member (68) of said gripping device (15) along said plane (PA).

21. (original) A method as claimed in Claim 1, wherein transfer from said platform (16) to said container (12) comprises picking up each stack (5) by means of a gripper (64) of a first gripping device (14), and transferring said stack (5) from said gripper (64) to a transfer member (68) of a second gripping device (15); said gripper (64) picking up the stacks (5) off said platform (16); and said transfer member (68) placing the stacks (5) inside said container (12).

22. (previously presented) A method as claimed in Claim 1, comprising arranging the stacks (5) of blanks on said platform (16) side by side to form layers (6); each layer (6) being defined by an M number of stacks (5) of blanks; said group (13) being defined by an N number of stacks (5) of blanks; and the M number being a whole multiple of N.

23. (previously presented) A method as claimed in Claim 1, wherein a transfer unit (11) is formed by the platform (16) for supporting a number of blanks (2) divided into stacks (5), and at least one transfer device (14, 15) for transferring said stacks (5) of blanks from the platform (16) to the store (10), wherein the blanks (2) are packed successively and seamlessly and aligned along a the first supply path (P1) of the pickup station (S1) of the packing machine (1); the transfer unit (11) also comprising the container (12) for housing the group of blanks (2) defined by at least two aligned and superimposed stacks (5), and which is movable along a the second path (P2) between a the loading station (S3) at said gripping device (14, 15) and the unloading station (S2) at said store (10).

24. (previously presented) A method as claimed in Claim 23, wherein the blanks (2) in said store (10) and in said container (12) at the unloading station (S2) extend perpendicularly to a first direction (D1), and the blanks (2) on said platform (16) and in said container (12) at the loading station (S3) extend perpendicularly to a second direction (D2) crosswise to the first direction (D1); the transfer unit (11) having a guide (33) parallel to the second path (P2) for guiding said container (12) and altering the orientation of the container (12) and the group (13) of blanks during transfer along said second path (P2).

25. (currently amended) A method as claimed in Claim 24, comprising forming said guide (33) with a first portion (34) parallel to the first direction (D1), a second portion (35) parallel to said second direction (D2), and a curved portion (36) connecting the first and second portions ~~portion~~ (34, 35).

26. (previously presented) A method as claimed in Claim 25, comprising locating said loading station (S3) along the second portion (35) of the guide, and said unloading station (S2) along said first portion (34) of the guide.

27. (previously presented) A method as claimed in Claim 26, comprising overlapping the first and second path (P1, P2) along a portion (T) parallel to the first direction (D1); said unloading station (S2) being located along said portion (T); said first path (P1) being defined by a conveyor (17) with belts (18); and said container (12) being mounted on a carriage (32) insertable between the belts (18) along said portion (T).

28. (currently amended) A method as claimed in Claim 23, comprising feeding said stacks (5) of blanks to said container (12) by a transfer member (68) of a the gripping device (15).

29. (previously presented) A method as claimed in Claim 28, comprising providing a further gripping device (14) for transferring said stacks (5) of blanks from said platform (16) to the gripping device (15); said further gripping device (14) comprising a gripper (64) for inserting a stack (5) of blanks into said transfer member (68).

30. (previously presented) A method as claimed in Claim 28, comprising providing said transfer member (68) with a reference system and control members (76, 77) for determining the position of the blanks (2) in each stack (5) in said transfer member (68).

31. (previously presented) A method as claimed in Claim 30, comprising providing said reference system with two lateral walls (71) maintained parallel to each other by said control members (76, 77), which comprise elastic means (76), and sensors (77) for detecting deformation of the elastic means (76).

32. (previously presented) A method as claimed in Claim 31, wherein, under the action of said elastic means (76), said lateral walls (71) exert a compression force on the stack (5) of blanks positioned incorrectly in said transfer member (68); said compression force aligning the stack (5) or

the blanks (2) with respect to the reference system.

33. (previously presented) A method as claimed in Claim 31, comprising providing movement of said gripping device (15) between a receiving position, a transfer position to transfer the stack (5) of blanks to said container (12), and a reject position (E) to reject the stacks (5) of blanks not aligned to the reference system or containing blanks (2) not aligned to the reference system.

34. (previously presented) A method as claimed in Claim 29, providing said gripping device (15) and said further gripping device (14) with respective means (76, 63) for moving said transfer member (68) and said gripper (64) along a plane (PA).

35. (previously presented) A method as claimed in Claim 34, comprising arranging the stacks (5) on said platform (16) side by side to form superimposed layers (6); and providing said platform (16) with a lifting device (62) for moving said platform (16) vertically, and with a level sensor (SL) for positioning the top layer (6), each time, in said plane (PA).

36. (currently amended) A method as claimed in Claim ~~34~~ 23, comprising positioning said container (12) along said guide (33), and for so positioning the container (12) at the loading station (S3) as to define a surface for supporting the stacks (5) in said container (12) and lying in said plane (PA).

37. (previously presented) A method as claimed in Claim 36, comprising providing said container (12) with a first wall (39); said surface for supporting the stacks (5) being defined by said first wall (39) when said container (12) is empty; and said surface for supporting the stacks being defined by the top blank (2) in said container (12) when the container (12) is partly filled.

38. (previously presented) A method as claimed in Claim 23, comprising providing the store with a push device (20) having a supporting wall (25) perpendicular to said first path (P1) and movable along said first path (P1) to support the blanks (2) in said store (10).

39. (previously presented) A method as claimed in Claim 38, comprising positioning said blanks (2) in a conveyor on edge; the and feeding said supporting wall (25) along the first path (P1) independently of said conveyor (17).

40. (previously presented) A method as claimed in Claim 39, comprising providing said push device (20) with detecting means (26, 27, 28) for detecting pressure exerted on said supporting wall (25) in said first direction (D1); and controlling said supporting wall as a function of said pressure.

41. (previously presented) A method as claimed Claim 38, comprising providing said push device (20) with a further actuator (31) for rotating the supporting wall (25) between a work position in which the supporting wall (25) is located along said first path (P1), and a rest position in which said supporting wall (25) is located alongside said first path (P1).

42. (cancelled)

43. (new) A method of transferring blanks, on a packing machine, from a platform (16) supporting a number of blanks (2) divided into stacks (5), to a store (10) where the blanks (2) are packed successively and seamlessly along a first supply path (P1) of a pickup station (S1) of the packing machine; the method comprising the step of

forming, at a loading station (S3) and by means of at least one gripping device (14, 15), a group (13) of blanks defined by at least two stacks (5) superimposed and aligned in a container (12);

feeding the container (12) along a second path (P2) to an unloading station (S2) at the store (10);

transferring said group (13) of blanks all together from the container (12) to the store (10);

determining the position of the blanks (2) in each stack (5) with respect to a reference system by a transfer member (68) of the gripping device (15) as said transfer member (68) is transferred from the platform (16) to said loading station (S3); and

locating the reference system on said transfer member (68) by walls (71).

44. (new) A method as claimed in Claim 43, comprising aligning any misaligned blanks (2) in said stacks (5) by said transfer member (68).

45. (new) A method as claimed in Claim 43, comprising rejecting blanks (2) not aligned in said stacks (5) by said gripping device (15).

46. (new) A method of transferring blanks, on a packing machine, from a platform (16) supporting a number of blanks (2) divided into stacks (5), to a store (10) where the blanks (2) are packed successively and seamlessly along a first supply path (P1) of a pickup station (S1) of the packing machine; the method comprising the step of

forming, at a loading station (S3) and by means of at least one gripping device (14, 15), a group (13) of blanks defined by at least two stacks (5) superimposed and aligned in a container (12);

feeding the container (12) along a second path (P2) to an unloading station (S2) at the store (10);

transferring said group (13) of blanks all together from the container (12) to the store (10);
and

finding the blanks (2) in said store (10) along said first path (P1), and supporting said blanks (2) by a supporting wall (25) parallel to said blanks (2) and movable along the first path (P1).

47. (new) A method as claimed in Claim 46, wherein said blanks (2) are fed by a conveyor (17); said supporting wall (25) being activated by an actuator (24) controlled independently by the conveyor (17).

48. (new) A method as claimed in Claim 46, comprising activating said supporting wall (25) by an actuator (24) as a function of pressure between the supporting wall (25) and the blanks (2) in the store (10).

49. (new) A method of transferring blanks, on a packing machine, from a platform (16) supporting a number of blanks (2) divided into stacks (5), to a store (10) where the blanks (2) are packed successively and seamlessly along a first supply path (P1) of a pickup station (S1) of the packing machine; the method comprising the step of

forming, at a loading station (S3) and by means of at least one gripping device (14, 15), a group (13) of blanks defined by at least two stacks (5) superimposed and aligned in a container (12);
feeding the container (12) along a second path (P2) to an unloading station (S2) at the store (10);

transferring said group (13) of blanks all together from the container (12) to the store (10);
and

moving a supporting wall (25) from a work position in which the supporting wall (25) is located along the first path (P1), to a rest position in which said supporting wall (25) is located alongside said first path (P1).

50. (new) A method as claimed in Claim 49, comprising setting said supporting wall (25) to the rest position when said group (13) of blanks is fed into the unloading station (S2) and exerts a given pressure on said supporting wall (25).

51. (new) A method as claimed in Claim 50, comprising moving the supporting wall (25) in the first direction (D1) upstream from the group (13) of blanks, while maintaining said supporting wall (25) in the rest position; the supporting wall (25) being moved into the work position; and the supporting wall is brought into contact with the group (13) of blanks.

52. (new) A method of transferring blanks, on a packing machine, from a platform (16) supporting a number of blanks (2) divided into stacks (5), to a store (10) where the blanks (2) are packed successively and seamlessly along a first supply path (P1) of a pickup station (S1) of the packing machine; the method comprising the step of

forming, at a loading station (S3) and by means of at least one gripping device (14, 15), a group (13) of blanks defined by at least two stacks (5) superimposed and aligned in a container (12);
feeding the container (12) along a second path (P2) to an unloading station (S2) at the store (10);

transferring said group (13) of blanks all together from the container (12) to the store (10);
and

transferring each stack (5) from said platform (16) to said container (12) along a plane (PA) and without changing the level of the stack (5).

53. (new) A method as claimed in Claim 52, wherein the stacks (5) on said platform (16) are arranged side by side to form superimposed layers (6); the method further comprising moving said platform (16) vertically so that, each time, the top layer (6) lies in said plane (PA).

54. (new) A method as claimed in Claim 52, comprising moving said container (12) so that a surface supporting the stacks (5) in said container (12) lies in said plane (PA).

55. (new) A method as claimed in Claim 54, comprising supporting the stacks (5) by a wall (39) of said container (12) or by the top blank (2) in the top stack (5) housed in the container (12).

56. (new) A method as claimed in Claim 52, comprising moving a transfer member (68) of said gripping device (15) along said plane (PA).

57. (new) A method of transferring blanks, on a packing machine, from a platform (16) supporting a number of blanks (2) divided into stacks (5), to a store (10) where the blanks (2) are packed successively and seamlessly along a first supply path (P1) of a pickup station (S1) of the packing machine; the method comprising the step of

forming, at a loading station (S3) and by means of at least one gripping device (14, 15), a group (13) of blanks defined by at least two stacks (5) superimposed and aligned in a container (12);

feeding the container (12) along a second path (P2) to an unloading station (S2) at the store (10); and

transferring said group (13) of blanks all together from the container (12) to the store (10);

wherein transfer from said platform (16) to said container (12) comprises picking up each stack (5) by means of a gripper (64) of a first gripping device (14), and transferring said stack (5) from said gripper (64) to a transfer member (68) of a second gripping device (15); said gripper (64) picking up the stacks (5) off said platform (16); and said transfer member (68) placing the stacks (5) inside said container (12).